

Listing of Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application.

1. (Previously Presented - Allowed) A self-pointing antenna comprising:

an antenna comprising a reflector, a feed, an elongated boom arm coupled to said reflector and supporting said feed, and a pair of support struts coupled between said reflector and said boom arm; and

a single actuator operatively coupled with said support struts for permitting movement of said support struts for adjusting the position of said feed relative to said reflector so as to selectively adjust either/or both of the beam elevation and azimuth of a main beam axis of said antenna.
2. (Original - Allowed) The antenna of claim 1 wherein said actuator is mounted to said boom arm and comprises a two-axis actuator.
3. (Original - Allowed) The antenna of claim 2 wherein said actuator is mounted to a top side of said boom arm.
4. (Original - Allowed) The antenna of claim 2 wherein said actuator is mounted to a bottom side of said boom arm.
5. (Original - Allowed) The antenna of claim 2 wherein said actuator comprises an automotive mirror-glass actuator.

6. (Original - Allowed) The antenna of claim 1 wherein each of said support struts comprises an elongated ligature and said actuator comprises a mechanism for adjusting the effective length of one or both of said ligatures.
7. (Original - Allowed) The antenna of claim 6 wherein said actuator is mounted to said boom arm.
8. (Original - Allowed) The antenna of claim 6 wherein said actuator is mounted to said reflector.
9. (Cancelled)
10. (Previously Presented - Allowed) In an antenna structure, a method of self-directing a main beam axis of said antenna structure, said method comprising:
 - supporting a feed on an elongated boom arm coupled to said reflector;
 - supporting said boom arm by a pair of support struts extending between said reflector and said boom arm; and
 - adjusting an effective length of one or both of said support struts by providing a single actuator to thereby adjust the position of said feed relative to said reflectors so as to selectively adjust either/or both of a beam elevation and beam azimuth of the main beam axis of said antenna.
11. (Previously Presented - Allowed) The method of claim 10 wherein said adjusting comprises mounting said actuator to said boom arm and support struts.
12. (Original - Allowed) The method of claim 11 wherein said actuator is mounted to a top side of said boom arm.

13. (Original - Allowed) The method of claim 11 wherein said actuator is mounted to a bottom side of said boom arm.

14. (Cancelled).

15. (Cancelled).

16. (Cancelled).

17. (Cancelled)

18. (Cancelled)

19. (Cancelled).

20. (Cancelled).

21. (Cancelled).

22. (Cancelled).

23. (Cancelled)

24. (Previously Presented - Allowed) A self-pointing antenna comprising:

an antenna comprising a reflector, a feed, an elongated boom arm coupled to said reflector and supporting said feed, and a pair of support struts coupled between said reflector and said boom arm; and

a single actuator placed in a single location operatively coupled with said support struts for permitting movement of said support struts and/or said boom arm for adjusting the position of said feed relative to said reflector so as to selectively adjust either/or both of the beam elevation and azimuth of a main beam axis of said antenna.

25. (Original - Allowed) The antenna of claim 24 wherein said actuator connects said boom arm to said support struts and by rotation of the actuator causes the angle between the struts and boom arm to be adjusted.
26. (Original - Allowed) The antenna of claim 25 wherein said actuator is mounted to said boom arm and comprises a two-axis actuator.
27. (Original - Allowed) The antenna of claim 26 wherein said actuator is mounted to a top side of said boom arm.
28. (Original - Allowed) The antenna of claim 27 wherein said actuator is mounted to a bottom side of said boom arm.
29. (Original - Allowed) The antenna of claim 26 wherein said actuator comprises an automotive actuator.
30. (Original - Allowed) The antenna of claim 24 wherein each of said support struts comprises an elongated ligature and said actuator comprises a mechanism for adjusting the effective length of one or both of said ligatures.
31. (Original - Allowed) The antenna of claim 30 wherein said actuator is mounted to said boom arm.
32. (Original - Allowed) The antenna of claim 30 wherein said actuator is mounted to said reflector.
33. (Cancelled)
34. (Currently Amended) A self-pointing antenna comprising:

a reflector, ~~one of a feed, and~~ a sub-reflector, and a plurality of support struts coupled between said reflector and said ~~one of a feed and~~ a sub-reflector and supporting said ~~one of a feed and~~ a sub-reflector; and
a single actuator for adjusting the position of said ~~one of a feed and~~ a sub-reflector relative to said reflector so as to selectively adjust either/or both of the beam elevation and azimuth of a main beam axis of said antenna.

35. (Amended) The antenna of claim 34 wherein said actuator is mounted to said ~~one of a feed and~~ a sub-reflector and comprises a two-axis actuator.

36. (Original) The antenna of claim 34 wherein said actuator is mounted to said ~~one of a feed and~~ a sub-reflector.

37. (Original) The antenna of claim 34 wherein said actuator comprises a two-axis motorized carriage.

38. (Original) The antenna of claim 36 wherein said actuator comprises a two-axis motorized carriage.

39. (Original) The antenna of claim 34 wherein said actuator comprises a pair of orthogonally acting mechanisms, each comprising a lead screw and at least one guide rail and a motor attached to said lead screw.

40. (Original) The antenna of claim 39 wherein said actuator is mounted to said ~~one of a feed and~~ a sub-reflector.

41. (Cancelled)

42. (Original) The antenna of claim 34 and further including a readout device operatively coupled to said actuator to allow closed loop control of the position of said sub-reflector.

43. (Original) The antenna of claim 39 and further including a readout device operatively coupled to said actuator to allow closed loop control of the position of said sub-reflector.

44. (Currently Amended) In an antenna structure having a reflector, ~~and one of a feed and a~~ sub-reflector, a method of self-directing a main beam axis of said antenna structure, said method comprising:

supporting a sub-reflector by a plurality of support struts extending between said reflector and said sub-reflector; and

adjusting the position of said ~~one of a feed and a~~ sub-reflector relative to said reflector so as to selectively adjust either/or both of a beam elevation and beam azimuth of the main beam axis of said antenna, wherein said adjusting comprises operating ~~mounting~~ a single actuator mounted to said ~~one of a feed and a~~ sub-reflector and said support struts.

45. (Cancelled)

46. (Cancelled).

47. (Currently Amended) A self-pointing antenna comprising:

a reflector, ~~and one of a feed and a~~ sub-reflector

means for supporting said ~~one of said feed and said~~ sub-reflector operatively coupled to said reflector; and

means for adjusting the position of said ~~one of a feed and a~~ sub-reflector relative to said reflector so as to selectively adjust either/or both of a beam elevation and beam azimuth of the main beam axis of said antenna, said adjusting means comprising a single actuator.

48. (Cancelled)

49. (Currently Amended) The antenna of claim 48 wherein said actuator is mounted to said ~~one of a feed and a~~ sub-reflector.

50. (Original) The antenna of claim 48 wherein said actuator comprises a two-axis motorized carriage.

51. (Original) The antenna of claim 49 wherein said actuator comprises a two-axis motorized carriage.

52. (Original) The antenna of claim 51 wherein said actuator comprises a pair of orthogonally acting mechanisms, each comprising a lead screw and at least one guide rail and a motor attached to said lead screw.

53. (Cancelled).

54. (Currently Amended) The antenna of claim 51 and further including a readout device operatively coupled to said actuator to allow closed loop control of the position of said ~~one of a feed and a~~ sub-reflector.

55. (Currently Amended) The antenna of claim 52 and further including a readout device operatively coupled to said actuator to allow closed loop control of the position of said ~~one of a feed and a~~ sub-reflector.

56. (Cancelled)

57. (New) In an antenna structure having a reflector and one of a feed and a sub-reflector, a method of self-directing a main beam axis of said antenna structure, said method comprising:

supporting a sub-reflector by a plurality of support struts extending between said reflector
and said one of said feed and said sub-reflector; and

adjusting either/or both of a beam elevation and beam azimuth of the main beam axis of said antenna by adjusting the position of said one of said feed and said sub-reflector relative to said reflector.

58. (New) The method of claim 57 wherein said adjusting either/or both of a beam elevation and beam azimuth of the main beam axis of said antenna comprises mounting an actuator to said one of a feed and a sub-reflector and said support struts.

59. (New) The method of claim 57 wherein said adjusting either/or both of a beam elevation and beam azimuth of the main beam axis of said antenna comprises mounting at least two actuators to said reflector and to at least two of said support struts.

60. (New) The method of claim 57 wherein said antenna comprises both said feed and said sub-reflector and adjusting either/or both of a beam elevation and beam azimuth of the main beam axis of said antenna comprises adjusting the position of both of said feed and said sub-reflector relative to said reflector.

61. (New) In an antenna structure having a reflector, a feed and a sub-reflector, a method of self-directing a main beam axis of said antenna structure, said method comprising:

supporting a sub-reflector by a plurality of support struts extending between said reflector and said sub-reflector; and

adjusting either/or both of a beam elevation and beam azimuth of the main beam axis of said antenna by adjusting the position of said sub-reflector relative to said reflector.

62. (New) The method of claim 61 wherein said adjusting either/or both of a beam elevation and beam azimuth of the main beam axis of said antenna comprises mounting an actuator to said one of a feed and a sub-reflector and said support struts.

63. (New) The method of claim 61 wherein said adjusting either/or both of a beam elevation and beam azimuth of the main beam axis of said antenna comprises mounting at least two actuators to said reflector and to at least two of said support struts.

64. (New) The method of claim 61 wherein said adjusting either/or both of a beam elevation and beam azimuth of the main beam axis of said antenna further comprises adjusting the position of said feed relative to said reflector.

65. (New) The antenna of claim 34 wherein said single actuator is further adapted to adjust the position of said feed relative to said reflector so as to selectively adjust either/or both of the beam elevation and azimuth of a main beam axis of said antenna.

66. (New) The method of claim 44, wherein said antenna structure comprises both said feed and said sub-reflector and further comprises adjusting the position of said feed relative to said reflector so as to selectively adjust either/or both of a beam elevation and beam azimuth of the main beam axis of said antenna.

67. (New) The method of claim 47, wherein said means for adjusting the position of said sub-reflector is further adapted to adjust the position of said feed relative to said reflector so as to selectively adjust either/or both of the beam elevation and azimuth of a main beam axis of said antenna.

68. (New) In an antenna structure, a method of self-directing a main beam axis of said antenna structure, said method comprising:

supporting a feed on an elongated boom arm coupled to said reflector;

supporting said boom arm by a pair of support struts extending between said reflector and said boom arm; and

adjusting either/or both of a beam elevation and beam azimuth of the main beam axis of said antenna by adjusting a effective length of one or both of said support struts to thereby adjust the position of said feed relative to said reflectors.

69. (New) The method of claim 68 wherein said adjusting comprises mounting an actuator to said boom arm and support struts.

70. (New) The method of claim 69 wherein said actuator is mounted to a top side of said boom arm.

71. (New) The method of claim 69 wherein said actuator is mounted to a bottom side of said boom arm.

72. (New) The method of claim 68 wherein adjusting comprises mounting a pair of actuators to said reflector, each actuator operatively coupled to said one of said support struts.